IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

IN RE: BOESEN, Peter V.	)
	) **APPEAL NO. _____**
SERIAL NO: 10/022,022	)
	)
FOR: VOICE COMMUNICATION DEVICE WITH FOREIGN LANGUAGE TRANSLATION	)
	) **BRIEF ON APPEAL**
FILED: December 13, 2001	)
	)
GROUP ART UNIT: 2626	)
	)
CONF. NO: 2798	)

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TABLE OF CONTENTS

I. INTRODUCTION

This is an appeal of the Final Rejection dated December 11, 2007, finally rejecting claims 1-13 and 21-25, which are set forth in the attached Claim Appendix.

II. REAL PARTY IN INTEREST

The applicant, Dr. Peter V. Boesen, is the real party in interest in this appeal.

III. RELATED APPEALS AND INTERFERENCES

None.

IV. STATUS OF CLAIMS

Claims 1-13 and 21-25 are pending. Claims 1-13 and 21-25 have been rejected and are appealed.

V. STATUS OF AMENDMENTS

The last Amendment filed September 25, 2007, has been entered. No Amendment After Final has been filed.

VI. SUMMARY OF CLAIMED SUBJECT MATTER

A. The invention

The invention provides for an earpiece 10 for use for voice communication where foreign translation is used. The earpiece 10 includes multiple microphones 18, 20, 22 which allow the reception of voice communications in microphone positions or orientations relative to the person wearing the earpiece (Specification, p. 3, lines 21-24). Switching between the different microphones 18, 20, 22 or selection of one or more of the microphones 18, 20, 22 may be performed either manually or automatically to detect different voice sound information signals. The selected voice sound information may then be amplified, processed, and translated (Specification, p. 3, lines 16-31). The earpiece 10 may be nonocclusive to allow the wearer of the earpiece to continue to hear environmental sounds (Specification, p. 3, lines 17-20).

B. Independent claim 1.

Claim 1 is directed towards a method of voice communication. Claim 1 includes providing an earpiece 10 having a housing and a plurality of microphones 18, 20, 22 within the earpiece housing, the earpiece 10 adapted for being worn by a user; selecting at least one of the plurality of microphones 18, 20, 22 within the housing of the earpiece to detect a selected voice communication by a person other than the user (p. 6, lines 10-20); receiving the selected voice communication of a first language from the selected microphones; translating the selected voice communication from the first language to a second language by an intelligent control, the second language different from the first to create a translated voice

communication; and transducing the translated voice communication at a speaker within the earpiece unit (Specification, p. 6, lines 20-24).

C. Independent claim 12.

Independent claim 12 is directed towards a method of voice communication. The method includes: providing an earpiece 10 having a housing and having a plurality of microphones 18, 20, 22 within the housing and a speaker 12 within the housing, the earpiece adapted 10 for being worn by a user; selecting one of the plurality of microphones 18, 20, 22 of the earpiece 10 to detect a selected voice communication (Specification, p. 6, lines 10-20); receiving the selected voice communication of a first language from the selected microphone; transmitting the selected voice communication from the earpiece unit 10 to a translation device 30 using a short range transmitter 26; translating the selected voice communication at the translation device 30 from the first language to a second language using an intelligent control, the second language different from the first to create a translated voice communication; transmitting the translated voice communication from the translation device 30 to the earpiece unit 10 using a short range transmitter 34; transducing the translated voice communication at the speaker 12 within the earpiece 10 (See FIG. 2; FIG 3).

D. Independent claim 13.

Independent claim 13 is also directed towards a method of voice communication. Independent claim 13 includes: providing an earpiece 10 having a housing and having a plurality of microphones 18, 20, 22 within the housing, the earpiece 10 adapted for being worn by a user; selecting one of the plurality of microphones 18, 20, 22 of an earpiece unit to

detect a selected voice communication (Specification, p. 6, lines 10-20); receiving the selected voice communication of a first language from the selected microphones; transmitting the selected voice communication from the earpiece unit 10 using a short range transmitter 26; receiving the selected voice communication with a short range receiver 32 and sending the selected voice communication over a communications channel to a remote unit; translating the selected voice communication at the remote unit from the first language to a second language using an intelligent control, the second language different from the first to create a translated voice communication; sending the translated voice communication from the remote unit over the communications channel; transmitting the translated voice communication to the earpiece 10 unit using a short range transmitter 34; and transducing the translated voice communication at a speaker 12 within the earpiece housing (See e.g. FIG. 2; FIG. 3).

E. Independent claim 21.

Independent claim 21 is also directed towards a method of voice communication. Claim 21 includes: providing a nonocclusive earpiece housing 10 and having a plurality of inputs for receiving voice communication and a speaker, the nonocclusive earpiece housing adapted for being worn by a user; receiving the voice communication from at least one of the inputs; translating the voice communication to a different language using an intelligent control to create a translated voice communication; transducing the translated voice communication at the speaker of the nonocclusive earpiece 10 (See e.g. FIG. 1; FIG. 2; FIG . 3).

F. Independent claim 25.

Independent claim 25 is directed towards a method of voice communication. Independent claim 25 includes: providing an earpiece 10 having a housing and a plurality of microphones 18, 20, 22 within the earpiece housing, the earpiece 10 adapted for being worn by a user; selecting at least one of the plurality of microphones 18, 20, 22 within the housing of the earpiece 10 to detect a selected voice communication (Specification, p. 6, lines 10-20); receiving the selected voice communication of a first language from the selected microphones; electronically translating the selected voice communication from the first language to a second language, the second language different from the first to create a translated voice communication; and transducing the translated voice communication at a speaker 12 9See e.g. FIG. 1; FIG. 2; FIG. 3).

VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1-13 and 21-24 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Lee (US 2002/0010590) in view of Rueda (US Patent No. 6,157,727) and Aoki et al (US Patent No. 5,933,506)?

VIII. ARGUMENT

Not everyone who needs to communicate speaks the same language, thus increasing the need for foreign language translation. Applicant was the first to use an earpiece for

foreign language translation, where the earpiece is used to selectively pick up speech of someone other than the one wearing the earpiece.

This is not a case of claiming a prior art device altered by the mere substitution of one element for another known in the field. To the contrary, the combination of all the cited references still falls far short of the invention. None of these prior art references teach an earpiece being used to select and voice sound information of others for translation. To be sure, one skilled in the art can cherry pick disclosure from the prior art and still never find use an earpiece for foreign language translation, where the earpiece is used to selectively pick up speech of someone other than the one wearing the earpiece.

The arguments that follow include an analysis of the numerous deficiencies in the prior art references alone and in combination. In summary, the technical differences between the present invention and the prior art compel a finding of patentability.

A. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-13 and 21-24 are nonobvious with respect to Lee (US 2002/0010590) in view of Rueda (US Patent No. 6,157,727) and Aoki et al (US Patent No. 5,933,506).

1. Lee, the primary reference is deficient with respect to all the claims

Lee fails to disclose several features as claimed in the independent claims. First, Lee does not teach using an earpiece. Second, Lee does not disclose an earpiece having multiple microphones or other inputs. Third, Lee does not disclose sensing or picking up a voice communication from an earpiece and translating it to a speaker in the earpiece. Each of the independent claims include language relevant to these distinctions.

Lee is directed towards a language independent voice communication system which includes a translation unit for translating a one language input speech to one or more corresponding other languages speeches (Abstract). The device of Lee is clearly not an earpiece. Lee provides that an internal microphone can be used or an external microphone can be used with the device.

a. Lee is deficient with respect to claims 1-11

Claim 1 recites "providing an earpiece having a housing and a plurality of microphones within the earpiece housing, the earpiece adapted for being worn by a user; selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication by a person other than the user..." Lee does not teach "providing an earpiece having a housing and a plurality of microphones within the earpiece housing, the earpiece adapted for being worn by a user." The Examiner recognizes that "Lee does not teach the earpiece having a housing in which the earpiece is adapted for being worn by the user" (Office Action of December 11, 2007; p. 2). The Examiner further recognizes that "Lee does not teach an earpiece unit having a plurality of microphones" (Office Action of December 11, 2007; p. 3). Therefore, Lee is clearly deficient with respect to claim 1, and claims 2-11 which depend from claim 1.

b. Lee is deficient with respect to claim 12

Independent claim 12 similarly recites "providing an earpiece having a housing and having a plurality of microphones within the housing and a speaker within the housing, the earpiece adapted for being worn by a user; selecting one of the plurality of microphones of

the earpiece to detect a selected voice communication." Thus, Lee is clearly deficient with respect to claim 12. Therefore, Lee is clearly deficient with respect to claim 12.

c. Lee is deficient with respect to claim 13

Independent claim 13 similarly recites "providing an earpiece having a housing and having a plurality of microphones within the housing, the earpiece adapted for being worn by a user; selecting one of the plurality of microphones of an earpiece unit to detect a selected voice communication." Thus, Lee is clearly deficient with respect to claim 13.

d. Lee is deficient with respect to claim 21

Independent claim 21 recites "providing a nonocclusive earpiece housing and having a plurality of inputs for receiving voice communication and a speaker, the nonocclusive earpiece housing adapted for being worn by a user." Lee does not disclose such an earpiece. Thus, Lee is clearly deficient with respect to claim 21.

e. Lee is deficient with respect to claim 25

Independent claim 25 is directed towards a method of voice communication recites "providing an earpiece having a housing and a plurality of microphones within the earpiece housing, the earpiece adapted for being worn by a user; selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication." Lee does not disclose providing such an earpiece. Thus, Lee is clearly deficient with respect to claim 25.

2. The combination of Lee, the primary reference, with the secondary references is deficient with respect to all the claims

The Examiner relies upon Rueda as teaching a communication system including a hearing aid and a language translation system. Rueda teaches a hearing aid with a microphone 2 and an ear phone 5. The hearing aid of Rueda is in communication with a language translation system. The Examiner relies upon Aoki as teaching "a transmitter-receiver having ear-piece type acoustic transducing parts, which provides for a microphone for picking up bone-conducted sound, a directional microphone for picking up air-conducted sound and an electro-acoustic transducer for transducing a received speech sound and automatically processed the speech signal in accordance with use environments to send speech of the best quality" (Office Action of December 11, 2007; p. 3 citing col. 2, lines 38-51).

In order to combine the references, the Examiner alleges "It would have been obvious to one of ordinary skill at the time of the invention to modify the system of Lee to provide an earpiece housing adapted for being worn by a user, as suggested by Reuda, for the purpose of providing a portable convenient unit to the user" (Office Action of December 11, 2007; pp. 2-3). The Examiner further alleges "It would have been obvious to one of ordinary skill at the time of the invention to modify the system of Lee to provide an earpiece having a plurality of microphones, as was well known in the art, for the purpose achieving improved signal processing and signal enhancement" (Office Action of December 11, 2007; p. 3).

Aoki teaches an earpiece with an air microphone and a bone microphone. The purpose of these microphones is to pick up voice sound information of a person wearing the earpiece. Rueda uses an earpiece with a single microphone. Lee does not disclose an earpiece at all.

Independent claim 1 recites "selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication by a person other than the user." Neither Lee, nor Aoiki, nor Rueda alone or in combination disclose this step. The only reference which discloses more than one microphone in the housing of the earpiece is Aoki. Aoki et al. teaches an earpiece 10 with a directional microphone 15, an omnidirectional microphone 16, and a pickup 14 (see e.g. FIG. 1). The purpose of the omnidirectional microphone 16, Is to pickup noise (col. 6, lines 52-53). The pickup 14 is used to sense vibrations in the bone of the wearer of the earpiece, and not to sense voice communications of others. Moreover, although Aoki's earpiece includes a directional microphone, the device is "designed so that it faces the user's mouth when the lug 12 is put in the auditory canal 50; that is, it is adapted to pick up sounds only in a particular direction" (Col. 6, lines 31-33). Thus Aoki is clearly directed towards picking up sounds of a wearer of an earpiece. The very principle of operation of Aoki is that signals from a bone conduction microphone and an air conduction microphone are combined (Abstract; FIG. 5; FIG. 11).

In short, Aoki does not teach the step of "selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication by a person other than the user." This is because Aoki uses a bone conduction microphone and

an air conduction microphone to detect the sounds of a user of its earpiece. The omnidirectional microphone is used to pickup noise. Therefore, the Examiner should be reversed with respect to independent claim 1. As claims 2-11 depend from claim 1, these rejections should also be reversed.

Independent claim 12 recites "selecting one of the plurality of microphones of the earpiece to detect a selected voice communication." Neither Aoki, nor Rueda, nor Lee, alone or in combination teach or suggest such a step of select a microphone to detect a selected voice communication. In Aoki et al., its air conduction microphone and its bone conduction microphone are both used to transduce voice sound information of the wearer, thus there is no selection of microphones in order to detect a selected voice communication. Neither Rueda nor Lee disclose multiple microphones in an earpiece. Therefore, this rejection to claim 12 should be reversed.

Independent claim 13 recites "selecting one of the plurality of microphones of the earpiece to detect a selected voice communication." Therefore, this rejection to claim 13 should also be reversed for the same reasons expressed with respect to claim 12.

Independent claim 21 recites "providing a nonocclusive earpiece housing and having a plurality of inputs for receiving voice communication and a speaker, the nonocclusive earpiece housing adapted for being worn by a user." None of the cited references teach a nonocclusive earpiece. The Examiner indicates that "the hearing aid [of Rueda] is worn at the ear of the user (ITE BTE), which provides adequate support for a nonocclusive earpiece" (Office Action of December 11, 2007; p. 5). To the contrary, Rueda provides no support for

there being a nonocclusive earpiece. Whether an earpiece is in-the-ear (ITE) or behind-the-ear (BTE) is not instructive with respect to whether or not the ear piece is occlusive or not. Moreover, the claimed invention is not to a hearing aid, and the nonocclusivity of the claimed earpiece allows the user to hear ambient noise which would not be a concern for someone who is wearing a hearing aid. See e.g. Original Specification, p. 10, "This allows the operator to continue to hear the operator's surroundings even though the operator is also using the earpiece to receive voice communications."). It is further noted that Lee does not disclose an earpiece, and the earpiece of Aoki et al. is occlusive (see FIG. 1) as Aoki et al. plus the ear of the user. Therefore, this rejection to claim 13 must be withdrawn.

Independent claim 21 recites "providing a nonocclusive earpiece housing and having a plurality of inputs for receiving voice communication and a speaker, the nonocclusive earpiece housing adapted for being worn by a user." For the reasons expressed with respect to claim 13, none of the prior art references teach a nonocclusive earpiece housing. Therefore, this rejection to claim 21 should be reversed. As claims 22-24 depend from claim 21, these rejections should also be reversed.

Independent claim 25 recites in part "providing an earpiece having a housing and a plurality of microphones within the earpiece housing, the earpiece adapted for being worn by a user; selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication." As previously expressed, only Aoki discloses an earpiece with more than one microphone, and Aoki does not teach "selecting at least one of the plurality of microphones within the housing of the earpiece to detect a

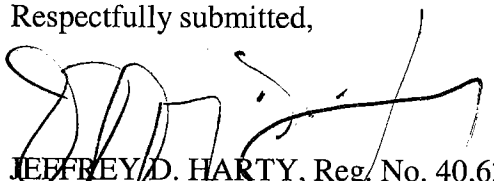
selected voice communication." The only voice communication that Aoki is concerned with is that of the user of the earpiece. Therefore, this rejection to claim 25 should be reversed.

IX. CONCLUSION

For the above-stated reasons, it is submitted that the claims are in a condition for allowability. The decision of the Examiner, therefore, should be reversed and the case allowed.

Please charge Deposit Account No. 26-0084 the amount of $270.00 for this Appeal Brief. Please also consider this a Request for five month extension of time from May 4, 2008 to October 4, 2008 and charge Deposit Account No. 26-0084 in the amount of $1,175.00 for this extension for filing the Appeal Brief. No other fees or extensions of time are believed to be due in connection with this appeal brief; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Respectfully submitted,



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X. APPENDIX - CLAIMS

1. A method of voice communication comprising:

providing an earpiece having a housing and a plurality of microphones within the earpiece housing, the earpiece adapted for being worn by a user;

selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication by a person other than the user;

receiving the selected voice communication of a first language from the selected microphones;

translating the selected voice communication from the first language to a second language by an intelligent control, the second language different from the first to create a translated voice communication; and

transducing the translated voice communication at a speaker within the earpiece unit.

2. The method of claim 1 wherein at least one of the plurality of microphones is a directional microphone.

3. The method of claim 1 further comprising transmitting the voice communication of a first language to a translation station and receiving the translated voice communication from the translation station.

4. The method of claim 1 wherein the step of translating is performed by a processor disposed within the earpiece.

5. The method of claim 1 wherein the plurality of microphones includes a front facing microphone, a rear facing, and a side facing microphone.

6. The method of claim 1 wherein the second language is English.

7. The method of claim 1 wherein the first language is English and the second language is different from the first language.

8. The method of claim 1 wherein the earpiece is nonocclusive.

9. The method of claim 1 wherein the step of selecting is manually selecting.

10. The method of claim 1 wherein the step of selecting is automatically selecting.

11. The method of claim 1 further comprising scanning each of the plurality of microphones.

12. A method of voice communication comprising:

providing an earpiece having a housing and having a plurality of microphones within the housing and a speaker within the housing, the earpiece adapted for being worn by a user;

selecting one of the plurality of microphones of the earpiece to detect a selected voice communication;

receiving the selected voice communication of a first language from the selected microphone;

transmitting the selected voice communication from the earpiece unit to a translation device using a short range transmitter;

translating the selected voice communication at the translation device from the first language to a second language using an intelligent control, the second language different from the first to create a translated voice communication;

transmitting the translated voice communication from the translation device to the earpiece unit using a short range transmitter;

transducing the translated voice communication at the speaker within the earpiece.

13. A method of voice communication comprising:

providing an earpiece having a housing and having a plurality of microphones within the housing, the earpiece adapted for being worn by a user;

selecting one of the plurality of microphones of an earpiece unit to detect a selected voice communication;

receiving the selected voice communication of a first language from the selected microphones;

transmitting the selected voice communication from the earpiece unit using a short range transmitter;

receiving the selected voice communication with a short range receiver and sending the selected voice communication over a communications channel to a remote unit;

translating the selected voice communication at the remote unit from the first language to a second language using an intelligent control, the second language different from the first to create a translated voice communication;

sending the translated voice communication from the remote unit over the communications channel;

transmitting the translated voice communication to the earpiece unit using a short range transmitter; and

transducing the translated voice communication at a speaker within the earpiece housing.

21. A method of voice communication, comprising:

providing a nonocclusive earpiece housing and having a plurality of inputs for receiving voice communication and a speaker, the nonocclusive earpiece housing adapted for being worn by a user;

receiving the voice communication from at least one of the inputs;

translating the voice communication to a different language using an intelligent control to create a translated voice communication;

transducing the translated voice communication at the speaker of the nonocclusive earpiece.

22. The method of claim 21 wherein at least one of the inputs is a bone conduction sensor.

23. The method of claim 22 wherein the nonocclusive earpiece further includes a processor.

24. The method of claim 23 wherein the processor is adapted to perform translation of the voice communication to the translated voice communication.

25. A method of voice communication comprising:

providing an earpiece having a housing and a plurality of microphones within the earpiece housing, the earpiece adapted for being worn by a user;

selecting at least one of the plurality of microphones within the housing of the earpiece to detect a selected voice communication;

receiving the selected voice communication of a first language from the selected microphones;

electronically translating the selected voice communication from the first language to a second language, the second language different from the first to create a translated voice communication; and

transducing the translated voice communication at a speaker.

XI. EVIDENCE APPENDIX

None

XII. RELATED PROCEEDING APPENDIX

None